

SYSTEM AND METHOD FOR DESIGNING DATA STRUCTURES

ABSTRACT OF THE DISCLOSURE

Systems and methods for designing data structures are provided. In one embodiment, an asynchronous first-in-first-out (FIFO) data structure may include, for example, a FIFO memory having a depth d in which d is an integer and a code generator coupled to the FIFO memory. The code generator may provide, for example, a first code sequence of length $2d$. The first code sequence may have a circular property and a Hamming length of one for any two consecutive codes of the first code sequence. The first code sequence may be generated from a second code sequence by removing one or more pairs of mirrored codes of the second code sequence.